

Claim Listing

This listing of claims will replace all prior versions and listings of claims in the application:

1 - 63: (cancelled)

64. (currently amended) An pET-15b expression vector
~~optimized for use in E. coli cells~~ comprising a first
nucleic acid sequence encoding a peptide extension for
enhancing the solubility and proper folding of a protein or
polypeptide of interest, wherein the encoded peptide
extension is selected from the group consisting of: Peptide
T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide
T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide
T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide
10 T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide
T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide
T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17),
Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO:
19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO:
22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO:
24) and Peptide T7A5 (SEQ ID NO: 25), the expression vector
further comprising a multiple cloning site for inserting,
in-frame with said first nucleic acid sequence, a second

nucleic acid sequence encoding said protein or polypeptide
20 of interest, said protein or polypeptide having a carboxyl-
and an amino- terminus, ~~is inserted in frame with said~~
~~first nucleic acid sequence~~, wherein expression of the
first and second nucleic acid sequences yields a fusion
protein consisting of the encoded peptide extension fused
to the carboxyl-terminus of the protein or polypeptide of
interest, and wherein the protein or polypeptide of
interest exhibits poor solubility and/or improper folding
when expressed in the absence of fusion to said peptide
extension.

65 - 100: (cancelled)